

REMARKS

Claims 1-29 remain in the application. Reconsideration and allowance are respectfully requested.

Claim Rejections under 35 U.S.C. § 112

Claims 1-29 have been rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. Applicants traverse this rejection and respectfully assert that the rejected claims are described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention.

Claims 1-29 have been rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement. Applicants traverse this rejection and respectfully assert that the rejected claims are described in the specification in such a way as to enable one skilled in the art to which it pertains, to make and use the claimed invention.

Specifically, the claimed checking predictor and checking predictions are described in such a way as to satisfy both the written description and enablement requirements. At the outset, Applicants point out that “[a] patent need not disclose what is well known in the art.” *In re Wands*, 858 F.2d 731, 735 (Fed. Cir. 1988). The internal functionality of checking predictors and checking predictions were well known in the art at the time Applicants filed the present application. See, for example, U.S. Patent No. 5,283,873 to Steely, Jr. et al. (“Steely”), which clearly describes a conventional prediction check stage that can be used to “determine whether the instruction is a branch instruction and, if it is a branch instruction, predict whether the branch

is taken.” Steely Col. 6:48-51. Steely goes on to explain that the prediction check stage may be used for conditional branches (Steely Col. 7:50-63), subroutine calls (Steely Col. 7:64-8:3), unconditional branches (Steely Col. 8:4-8) and subroutine returns (Steely Col. 8:13-21), and that the prediction check stage typically introduces latency into the pipeline. Steely Col. 8:22-27.

Moreover, Applicants’ own specification explains that at least one type of checking predictor is able to generate bimodal, global, return stack buffer (RSB) and indirect predictions, and that the line predictor may be constructed to approximate the predictions of such a checking predictor. See, Specification ¶ 0027; FIG. 7. Each of these types of predictions was well known in the art at the time Applicants filed the present application, as evidenced by patents such as Steely. Given the existence of well known techniques for making checking predictions and Applicants’ own description of example characteristics of checking predictors, it is clear from the specification that the inventors were in possession of the claimed invention when the application was filed and that one skilled in the art would be able to make and use the claimed invention from the written description. For at least the above reasons, Applicants request that the Examiner withdraw the instant rejections.

Claims 1-29 have been rejected under 35 U.S.C. § 112, second paragraph as failing to distinctly claim the invention. Applicants traverse this rejection and respectfully assert that the rejected claims are not indefinite.

In particular, the Examiner has stated that “applicant’s description of applicants’ checking predictor and how it functions... is so limited as to preclude the examiner from determining the true metes and bounds of applicants’ claims.” The Examiner goes on to state that “[s]urely, applicants cannot claim to have conceived of/invented all forms of checking predictor which are more complex than their next line predictor.” Office Action, p. 4. The

Examiner appears to be under the impression that the rejected claims recite nothing more than the generation of checking predictions. Applicants remind the Examiner that all recited limitations of the claims should be considered when determining the “true metes and bounds” of the claims. For example, claim 1 is directed to a method of predicting instruction branches that also includes the generation of a current next-line prediction and the generation of a subsequent checking prediction **based on the current next-line prediction**. Applicants assert that the claims, as a whole, particularly point out and distinctly claim the subject matter which Applicants regard as the claimed invention. For at least the above reasons, Applicants request that the Examiner withdraw the instant rejection.

CONCLUSION


For all the above reasons, the Applicant respectfully submits that this application is in condition for allowance. A Notice of Allowance is earnestly solicited.

The Examiner is invited to contact the undersigned at (202) 220-4255 to discuss any matter concerning this application. The Office is hereby authorized to charge any additional fees or credit any overpayments under 37 C.F.R. § 1.16 or § 1.17 to Deposit Account No. 11-0600.

Respectfully submitted,

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